

In the Claims:

1. (Currently Amended) An image input apparatus comprising:
an image formation unit array having a plurality of image formation units arranged in an array;
a photoelectric converter element having a flat photosensitive surface, the photosensitive surface being divided into regions, each corresponding to one of the image formation units, where each region includes a plurality of photosensitive elements arranged therein; and
a restricting member for restricting, independently for each of the plurality of image formation units, optical paths along which the light beams are focused,
wherein the plurality of image formation units individually receive light beams substantially from an identical area and focus the received light beams on different regions of the photosensitive surface of the photoelectric converter element to form two-dimensional images of a subject in corresponding regions of the photosensitive surface such that each two-dimensional image is an image of substantially the same area of an object in the identical area as seen from a different view point.
- 2-3. (Canceled)
4. (Previously Presented) An image input apparatus as claimed in claim 1, wherein the restriction member is realized as partition walls.
5. (Original) An image input apparatus as claimed in claim 4, wherein those pixels of the photoelectric converter element which output a bright-state signal when light enters the plurality of image formation units are regarded as effective pixels.
6. (Previously Presented) An image input apparatus as claimed in claim 1, wherein the restricting member is a polarizing filter array having polarizing filters arranged one for each group of the plurality of image formation units, every two adjacent polarizing filters having mutually perpendicular polarization angles.

7. (Original) An image input apparatus as claimed in claim 1, further comprising:
deflecting members provided one for each of the plurality of image formation units.

8. (Original) An image input apparatus as claimed in claim 1, further comprising:
spectroscopic members provided one for each of the plurality of image formation units.

9. (Original) An image input apparatus as claimed in claim 1, further comprising:
a signal processing system for processing signals obtained as a result of photoelectric conversion performed by the photoelectric converter element by using processing functions provided one for each of the plurality of image formation units.

10. (Previously Presented) An image input apparatus as claimed in claim 7, wherein the image formation units are diffracting optical elements, and the deflecting members are one-dimensional diffraction gratings.

11. (Previously Presented) An image input apparatus as claimed in claim 7, wherein the deflecting members are Fresnel zone plates, the Fresnel zone plates being constituent components of the image formation units, the Fresnel zone plates having pattern centers thereof so arranged as to be decentered in such directions as to deflect light incident thereon.

12. (Previously Presented) An image input apparatus as claimed in claim 8, wherein the spectroscopic members are diffraction gratings.

13. (Currently Amended) An image input apparatus as claimed in claim 8 12, wherein the diffraction gratings and the image formation units are integrated together as a diffractive optical element.

14. (Currently Amended) An image input apparatus as claimed in claim 8 12, wherein the diffraction gratings have different grating constants in two mutually perpendicular directions.